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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,751	03/29/2004	Winthrop D. Childers	200310249-1	5477

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HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

CRUZ, MAGDA

ART UNIT PAPER NUMBER

2851

DATE MAILED: 08/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/812,751

Applicant(s)

CHILDERS, WINTHROP D.

Examiner

Magda Cruz

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 1-9 and 15-27 is/are allowed.
6) ☒ Claim(s) 10-14 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 29 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03/29/2004.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 10-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Childers et al.

The applied reference has a common inventor with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Childers et al. (US Patent Number 6,729,734 B2) discloses:

- Regarding claim 10, a light source (Figure 3, element 62); means for modulating the spectral distribution of light (Figure 3, element 70) and pass modulated light (Figure 3, element 72) toward the display surface (Figure 3, element 78); and reflective means (i.e. DMD; column 3, lines 7-

9) for receiving light from the light source (column 3, lines 3-5) and selectively directing the light between the means for modulating the spectral distribution and the display surface (column 3, lines 10-11).

- Regarding claim 11, the reflective means includes a reflective light modulator (i.e. DMD; column 3, lines 7-9).
- Regarding claim 12, the reflective light modulator includes a digital micro-mirror device (i.e. DMD; column 3, lines 7-9).
- Regarding claim 13, optic means (Figure 1, element 34) for intercepting light reflected towards the display surface (Figure 1, element 16) from the means for modulating and the reflective means (column 3, lines 10-11).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Childers et al. in view of Morgan.

Childers et al. (US Patent Number 6,729,734 B2) teaches the salient features of the present invention as explained above (see Rejection under §102(e)), except a light trap and wherein the reflective means further includes means for selectively reflecting light toward the light trap.

Morgan (US Patent Number 6,567,134 B1) discloses a light trap (Figure 6, element 608) and wherein the reflective means (Figure 6, element 602) further includes means for selectively reflecting light (column 11, lines 2-8) toward the light trap (Figure 6, element 608).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize the light trap and reflecting means disclosed by Morgan, in substitution of the reflective means from Childers et al.'s invention, for the purpose of providing a method and a system to increase the brightness of the secondary colors (Morgan, column 2, lines 44-47).

Allowable Subject Matter

5. Claims 1-9 and 15-27 are allowed.
6. The following is a statement of reasons for the indication of allowable subject matter:
 - a. Regarding claim 1, the prior art of record neither shows nor suggests a reflective light modulator disposed to selectively reflect the light into a second optical path that bypasses the color modulator.
 - b. Regarding claim 15, the prior art of record neither shows nor suggests an interferometric modulator modulating the wavelength of light and passing the modulated light toward the display surface.
 - c. Regarding claim 18, the prior art of record neither shows nor suggests a reflective light modulator having an array of mirror elements that defines at least

two light paths including a first light path bypassing the color modulator and a second light path wherein reflected light passes from the light source to the color modulator before reaching the viewing optics.

d. Regarding claim 23, the prior art of record neither shows nor suggests a second path wherein mirror elements reflect the substantially white light to the color modulator that modulates the color of the light before reflecting the light of the second path to the display surface.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gibbon et al. (US Patent Number 6,582,080 B2) discloses a projection system that includes a SLM for importing image information to the projected light beam.

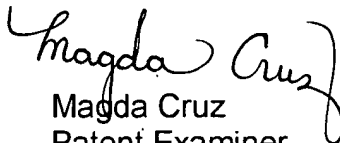
Childers et al. (US Patent number 6,817,717 B2) teaches a display system with low and high resolution modulators.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Magda Cruz whose telephone number is (571) 272-2114. The examiner can normally be reached on Monday through Thursday 8:00-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2851

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Magda Cruz
Patent Examiner
Art Unit 2851

August 17, 2005